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COTTON GINS SHOULD BE CLEAN [1]

Keeping a cotton gin clean is good business. It brings customers, makes for better ginning, prevents many losses, promotes safety of persons and property, and increases profit. The keenest ginners have clean gins.

To the customers, a clean gin carries an instinctive appeal of honesty and dependability, because it reflects the efforts and pride of the organization. It attracts the public because patrons and operators transact their business in good surroundings. A farmer has an aversion to hauling good grain to a musty mill; likewise a cotton grower dislikes to carry his fresh white cotton to a grimy, cobwebby, ramshackle cotton gin.

When gins are kept clean workers do better, are alert, and take pride in doing a good job quickly. The long line of waiting wagons quickly disappears at a clean gin which usually has few breakdowns and irritating delays. In the ill-kept, dingy outfit the ginner disappears into the gloom of dusty lint, cobwebs, and dirt-begrimed corners to repair "another break" which clean surroundings might have prevented.

Hazards of fire and accident, as well as ill health, are especially prevalent in dirty gins. Dust, grease, trash, and dirty walls, windows, and ceilings, all contribute to fires and fatalities.

To keep a gin clean requires trained employees, a daily routine, and cleaning equipment. A locker should be provided for the equipment which should include the following items:

1. Vacuum-cleaner type of hand blower, or a hand vacuum cleaner, or an air hose and nozzle if the gin has compressed air.
2. Brooms, bristle brushes, and a wire brush.
3. A flashlight, putty knife, and ice pick.
4. A square-nose shovel and a seed fork.
5. Metal trash barrels and buckets.
6. Wiping cloths and paper towels.
7. Cleaning powder, penetrating oil, and bar soap.
8. Extension cord and wire-guarded bulb.
9. Coarse and fine sandpaper.

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It is surprising how useful a putty knife and ice pick can be in cleaning around machinery in cotton gins.

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[1] The material presented here was prepared by the Staff of the U. S. Cotton Ginning Laboratory, Stoneville, Mississippi.

Paper and rags used for cleaning and wiping should be handled so as to prevent spontaneous combustion. Oily rags should only be stored in deep metal cans, safely covered. Routine oiling should follow routine cleaning.

Cotton ginning machinery is particularly susceptible to damage from grit, dust, and built-up combinations of grease or oil with lint, fly, or dirt. Bearings are cut out by grit, end-play begins in cylinders, and good fits between moving parts are lost when "grinding compounds" of grit and oil take effect.

In keeping a cotton gin clean, the following items are worthy of attention.

1. The Buildings: as to wiring, windows, walls, ceilings, floors, stairways, ladders, railings, drinking facilities, platforms, and toilets.
2. The Ginning Machinery: as to casings, surfaces, access doors and inspection lights; bearings, belts, shafting, couplings, grabs, levers and controls; and connections such as gin-flue take-offs, brackets, dirt spouts, and seed-handling apparatus.
3. The Lint-Handling Machinery: as to lint-flue, condenser, dust flues, tramper platen, press pump, scales, and stencils.
4. The Power and Millwright Equipment: as to shafting, bearings, pedestals, clutches, fans, belts, gears, and augurs.
5. Fans and Piping: as to screens, wheels, disks, and seed plugs.

Clean premises and buildings need little comment because their desirability is evident. But clean interiors of gin buildings are more important from the standpoint of efficient ginning. Light is essential and even clean windows seldom admit enough light. White walls and ceilings coated with cheap inside-white cold-water paint improve visibility and diffuse the light from windows.

In the ginning machinery itself, clean screens, machines, shafting, conveyor troughs, and inspection windows help the ginner to operate continuously. Separator and blow-box screens need cleaning every few hours under some ginning conditions. Damp, heavy cottons or snaps and bollies may coat and clog such screens resulting in shut-downs or damage. Vent pipes from these screens collect surprising amounts of trash unless cleaned out regularly. Chokages in tower driers have been traced to the filling up of blow-box screens and vents.

Feeders need cleaning periodically, and should be sanded where seed cotton sticks to rough lips or aprons.

Gin-stand ribs in the roll boxes and behind the rib-falls should be cleaned, if necessary, several times daily. Fires, rough samples, and rib breakage result from fouled ribs.

Within brush-gin stands, the dividing boards between saws and brushes should be made of metal or covered with metal and kept clean. Likewise, the wind board or backboard should be of metal or metal-covered. Spaces above brushes should be cleaned out frequently or filled in with curved metal hoods about 3/4-inch from bristle tips.

The incline from mote board to gin-flue connection in older gin stands is usually wooden and becomes rough, splintered, and eroded by sand and grit. Sheet-metal covers should be provided, and the moting lips and boards kept clean and free for adjustment. Failure to keep the mote lips of either brush or airblast gins clean may damage both sample and gin. "Honey dew", damp cottons, and residues from poisons or insects may cause the mote lips, nozzle tops, and backs of rib falls to become badly coated with motes, fly, and lint.

In some cotton gins, the seed are conveyed to an adjacent "seed-plug" located so close to the end stand that defective seed-plug flaps permit blowing dust and dirt as well as deflecting lint from the doffers to the gin flue. Remedy of such conditions may best be accomplished by installing a rotary vacuum-wheel seed dropper in lieu of the seed plug.

If ginning machinery is kept clean, rough keyways, defective bearings, dangerous vibration, and misalignment are quickly noted and corrected.

Lint handling in gins demands clean apparatus to prevent lowering the sample and to reduce fire hazards. No "tags" should be allowed to form in gin flues or in the main lint flue.

The condenser should be cleaned every day, and where vertical dust flues are used the roof should be kept clean to prevent trash returning to waiting trucks and wagons. Horizontal dust flues require frequent cleaning also.

If press pumps are not covered they can at least be kept clean. The upper side of tramper platen and press frame also come in for regular dusting and lint removal before oiling of parts.

Cotton-gin fans get out of balance from lint and fly building up on the blades. All fans need regular and frequent inspection. Both new cone-type and flat-disk Rembert fans must be cleaned behind the cone or disk periodically. All air discharges and dirt suction pipes from cleaners, extractors, and feeders must be kept free from chokage all the time. No dirt discharge should be located where wind or fan suctions will bring the dirt back into the gin. Since dirty intake screens on fans, heaters, radiators, etc. may dangerously reduce air volumes, they should be brushed off several times each day.